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DECEMBER 18, 1889.

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Farmer

HND



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Drawings and Estimates Made, and Plans Furnished and Will Contract for Any of the above Work.



Highline, Horniculture, Edve Stock and Rurel Comony, the oldest agricultural journal in Maryland, and for ten years the only one.

89 REW FARM.

Vol. XXVI. BALTIMORE, December 18, 1889. No. 17

For The Maryland Farmer.

THE CROPS OF THE FUTURE.

The first and greatest crop which is now growing is discontent. The farmers who in the years before the war were living in comparative comfort and luxury, now find themselves forced to be satisfied with the commonest necessaries of life.

The prices of everything to be purchased by them have increased until they must do without much that would add to their enjoyment and would ordinarily be called necessities.

The income from produce sold has dwindled to such a degree that they can no longer depend upon that to meet the usual expenses of seed, fertilizers and labor. The consequence is that in order to live (not so well as before the war) and pay the accumulated debts, many of the old homesteads have been placed under mortgage.

It is now very seldom that a farm can be found which is free from a mortgage to some city firm or capitalist, and which has its original owner for much more than a tenant at will to the mortgagee.

This being the case the next great crop of the future may be regarded as an epidemic of foreclosures. It has often been the boast that while 95 out of every 100 business men are sure to fail—scarcely any farmer has been forced into this army of the bankrupts.

This second great crop of the future, however, seems to be one which will reverse all this experience. In another article in this connection, Ohio is mentioned with over three hundred and thirty millions of dollars of mortgages on her farms, and other Western states show even greater agregates on the acreage of farms.

This crop has already commenced and the thousands of acres of farming lands, in every township of the New England

FIBRAGS

States, lying idle; given up to mortgagers; abandoned by their owners; for sale for less than the moderate cost of poor buildings, tells the story in stronger words than any I can put on paper.

When we see venerable homesteads in which generations of sturdy, industrious citizens have lived in comfort, abandoned and utterly forsaken; because their owners could not make a living upon them, know that the crop is ready for the reapers.

One more crop of the future I must mention. This is the crop which has grown up from the discontent and the necessity of bankruptcy. It is that of revolt.

Revolt against those rulers who have persisted in burdening the farming community with laws which are grinding them to powder. Revolt against taxes, which are supporting hundreds of thousands of able bodied men and women at their expense. Revolt against tariffs which are made to pour endless streams of wealth into the vaults of millionaires, who have no possible claim upon their generosity or the country to the injury of the farmer.

These are the crops of bitter and noisome weeds, which the future promises, unless something is speedily done to avoid the direful effects of the present.

In Massachusetts the farmers by an informal union worked an almost marvellous change. They swept from their legislature all opposition to the reforms they advocated. They delegated political backs and shysters to the background and placed tried and true men to the front.

This is the work farmers must do everywhere. Not only in the east, but in the west also; not only in the north, but in the south as well. This work must be done. Let the political elements which are now feeding upon the vitals of our country; which only ask for their own personal increase in wealth and position;

which care neither for the general prosperity nor the honest enforcement of just laws; let these elements be utterly swept away from the legislative halls and place concientious men who will legislate for, your good and the worst of these crops can be avoided.

W.

HOT WATER INCUBATOR.

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OUR PRINCIPLES.

Opposition to all adulterations and frauds;

To all monopolies and trusts;

To extravagant and unjust taxation:

To the holding of vast tracts of our land by foreigners.

We advocate that every family should own their home;

This home to a liberal extent should not be liable for debt:

This home, to the same extent, should be free from taxation;

The reward for labor should equal that of the professions.

Our politics is not for party, but is for the general welfare;

More farmers in our legislatures;

More money and less taxes;

Farmers must league together and redeem the land.

"Corn" means maize in the United States, in England and France it means wheat, in Central and Northern Europe it means rye or oats.

GARDEN NO ORCHARD.

We call especial attention to this list of Nurserymen, Seedsmen, Florists, etc. They all issue good Catalogues and will cheerfuly send you one free, if you write referring to the Maryland Farmer. We believe every one of them to be reliable.—Editor Md. Farmer.

Wm. H. Moon, dlenwood Fruit and Ornamental Nurseries. Morrisville, Pa.

D. H. Patty, Nurseries, Geneva, N. Y. Agents Wanted.

Wiley & Co. General Nurserymen and had cayuga, N. Y.

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Ellwanger & Barry, Mount Hope Nurseries, Rochester, N. Y.

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Wm. Parry, Grapes, etc. Small Fruits. Parry, N. J.

W. Atlee Burpee & Co. Seeds and Thorough-

Thos, Mechan & Son, Cals, Rare Ornamentals, Germantown, Pa.

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W.M. Peters & Sons, Peach Trees a Specialty. Wesley, Md.

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W. D. Beatie, Fruits & Flowers, specially adapt-

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P. J. Berckmans, to the South. Augusta, Ga.

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F. H. MOOEIS, Eastern grown Garden Seeds. Pittston, Maine.

Seed Potatoes, Standard old, choice new var-

A.W. Livingston's Sons, Specialty, New Tomatoes. Columbus, O

For the Maryland Farmer.

KITCHEN GARDENS ONCE MORE.

Can we prevail upon every farmer to have a good garden from which his family may have an early and late supply of vegetables?

We have had a series of articles on this general subject from our correspondent "Chapman," whose monthly communication is not at hand at present. We have also printed a series of excellent articles from Mr. Sanderson, another esteemed correspondent, on a kindred subject, but more especially relating to profit and marketing in connexion with small fruits and vegetables, and going into the details of preparing ground, fertilizing cultivating and harvesting such produce.

These, however, have not attempted to speak particularly of the kitchen garden; which to our mind is the best part of the farm to the family.

Any of the catalogues of the seedsmen will give the principal vegetables and fruits to be grown in the kitchen garden and as they will all be issued about the first of January any of our readers will be at liberty to find what they may want by addressing as many of the above list as they may choose.

The catalogues are generally sent in answer to a postal card; but we advise that our readers send a letter and enclose a 2c stamp at least. Then if you should chance not to buy of any particular one, your conscience will be at ease and the seedsman will not be out of all his postage as well as his catalogue.

Most of the vegetables and luxuries can be had on the home table with very little trouble: Among the first are Asparagus and Rhubarb or Pie Plant, which should never be neglected. The acid of the Pie Plant in early spring is a decided benefit to the household, and the rich Asparagus brings with it a foretaste of the garden luxuries. Spinach, peas, beets, turnips, early potatoes, green corn, beans, tomatoes, onions, radishes, and all their ilk, make home happy and take the place of the meat diet of the winter season.

Besides these, the fruits should be re-

membered. The berries make half of the glory of the meals from June until August, while the larger fruits deck the board from August until mid-winter.

Fruits and vegetables—so easily to be had upon every farm—will make up a large and very satisfactory part of the daily living; while they give health to those who use them and keep the doctor at a distance.

We say nothing of their cultivation for outside market and profit. That work has been delegated to other hands, and "Chapman" will study by the winter's lamp for the good of us all.

RHUBARB.

Good care will require that attention be given these roots this month if much is expected from them early in the spring.

They should be mulched with coarse stable manure, sufficient to protect them from the effects of freezing and thawing during the winter.

FOREST LEAVES.

Again we call attention to the amount of fertilizer which any one can have who will take the very slight trouble of gathering leaves. Gather them and use them for litter, for bedding in the barn yard, in the chicken house and in the pig pen. They are always of value.

On the eastern shore, in the southern counties of that famous peninsula, the hundreds of thousands of barrels of sweet potatoes are mainly fertilized with pine "shatters," wintered in the barn yards, and liberally spread upon the fields.

Nothing of this character should be wasted.

Entered as second class matter at Baltimore, Md .

THE

MARYLAND FARMER

NEW FARM.

Agriculture, Live Stock and Heme Life.

Oldest Agricultural Journal in Maryland and for ten years the only one.

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are subject to the same discount.
Covers, p. 2 add 30, 3 add 25, 4 add 50.
Special location, on any page, 20 per cent extra.

No reading notices free. Reading notices twice the price of advertisements.

ISSUED EVERY WEEK.

SPECIAL NOTICE.

Those who are in arrears for the vear 1888, will please take notice that our terms are \$1.00 in advance, and \$1.50 if not paid until the close of the year. wish to give all our subscribers evidence of our liberal disposition in this respect, and will now give them a reasonable time, say one month, to pay at \$1.00 a year, for all arrearages, after which they will be charged at published rates. This notice appeared the first of December and ends with January 1st.

Having made such arrangements that we can supply any of our readers with facilities for procuring homes, either in the city or in the country, we would ask

that they make their wants known to us. The wide range over which this magazine extends will enable us to gather information from Maine to California, and to meet almost every case without cost to you.

For The Maryland Farmer.

MORTGAGED FARMS.

The official inquiry in Ohio by the legislature as to mortgages on farms in that State, shows 291,640 and the amount \$330,999,205.

This is one of the prosperous states and the people do not feel discouraged because of the immense interest they are paying and the outlook into bankruptcy which is before them.

Go on, brother farmers; pay all others interest; pay the taxes of every other who holds mortgages or bonds; pay the manufacturers a bonus for charging you two prices for implements instead of one reasonable price; have less and less for your own necessities, and be content!

Where is the farmer's political league.

W.

For The Maryland Farmer.

THE CHICKEN WORLD.

Our present Sec'y of Agriculture, is in favor of giving considerable attention to Poultry. Where two hundred millions of dollars are invested in a business, it seems to him worthy of some attention from his department. All honor to him for his good words.

I. K. Felch, so well known as a successful raiser of fancy poultry gives some items of value from his experience. It will cost an average of \$1.00 a year to keep any mixed lot of common stock of hens. will cost an average of \$1.18 a year to keep thoroughbred Brahmas. It is necessary for best results to keep poultry with farm range. It is also best for fancy stock to hatch all breeding birds under hens and which have not already been pruned, not in an incubator. The use of a brooder however, is advisable.

The equally well known Mr. James Rankin thinks incubator chickens are in every way superior to chickens hatched under the hen.

Doctors disagree in the chicken world as well as in other fields of expert experi-

It is greatly desirable that a good breed of fowls be kept, which will give large dark shelled eggs and plenty of them, dress a good sized carcass with vellow legs, and supply rapidly fattening chicks for early spring broilers. This is the breed everybody wants at present for general profit.

Dogs are a great nuisance in connexion with Poultry keeping. They kill the chickens, eat the eggs, break up the nests, and generally demoralize flocks. are a nuisance always.

The Poultry Editor of the Mirror and Farmer recommends a four fold cross and gives two samples. One of black chickens, and one of brown chickens. The first Langhans, Black Wyandottes, Javas and Houdans using pure bred males each time and then repeat. The second Brown Leghorns, Partridge Cochins, Black Red pit games, Colored Dorkins as before. Claims a continued improvement of stock.

A warm poultry house, always above the freezing point, is needed in winter for the best results. This is to be secured by the method of building and indirect heating, rather than by the introduction of stoves. Winter ventilation in the poultry house is a theory no longer considered of much value. The use of tarred paper on walls and ceiling is a help to the house.

Renew your subscription now.

PRUNING GRAPE VINES.

All throughout this region grape vines should be carefully attended to month.

The expert will examine the vine, carefully cut the tendrils on each branch as far down as he wishes to prune; then clip off the branch.

If he wishes to propogate the vine, take cuttings from these branches the proper length, tie in bunches and bury in sand with tops down. These set out in the Spring.

SPECIMEN COPIES.

We send out many Specimen Copies of our Weekly Magazine-The Maryland Farmer and New Farm.

We ask those who receive them to examine them and send us their order.

Date and sign the enclosed subscription blank and send to us.

If convenient send the cash \$1.00; but if not convenient to-day merely send the order now.

It will not cost you two cents a week to have this Magazine 52 times in the year.

Farms For Sale.

- 40 Acre Fruit Farm, 1600 to 1800 Peaches, 150 Apples, 75 Pears, 25 Wild Goose Plums, Nectarines, Cherries, all in bearing. 2 acres Blackberries, 3 acre Strawberries & Raspberries, 1000 Grape vines. Good dwelling, barns, etc., splendid soft water. Best loamy soil. A pleasant and delightful home, near E. New Market, Md. Only \$2000.—Title perfect.
- 300 Acres, near Cobb's Creek, Va., a beautiful home farm-much fruit and all the advantages of bordering on deep watersteamer from Baltimore, \$8,500

Address MARYLAND FARMER.

of making shipwreck of his life.

of the city

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who will exchange the sure comforts of the farm for

RESULTS OF THE LATEST INVES-TIGATIONS OF SWINE DISEASE.

 How Many Are Deceived as to Kidney Worm—Trichinæ Contracted by Hogs Eating the Refuse of a Slaughter House. Practical Men Testify.

G. Stuart & Son contribute to The Ohio Farmer some valuable suggestions gained by their experience with hogs. Practice, they say, has taught us the great necessity of being thoroughly posted in the symptoms in order to be able to prescribe treatment and cure. No. 1, in the illustration given herewith, represents the symptoms of kidney worms. Helminthology has taught us to see the fallacy of many cases of kidney worms. The parasite supposed to cause the loss of power, and to paralyze the muscles of the loins, is not present in 1 per cent. of the supposed cases. Furthermore, there is not one person in one hundred that ever saw a kidney worm; microscopy alone can decide and determine the presence of these parasites.

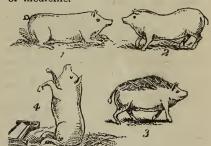
The animal in the illustration was supposed to be suffering from their presence, but as we had the opportunity of an examination of the kidneys, we are able to give the real truth of the case. The hog was slaughtered in our presence, and we removed both kidneys, in order to submit them to the microscope. We found myriads of trichinæ and also cysts imbedded in the kidney tissue. Had all the trichinæ been encysted, the hog would have shown no trouble in his movements, but those that were free were the parasites that caused the trouble. The owner being present at the examination decided that every part of the carcase should be minutely examined, and we found triching in

every stage.
On inquiry we found that the pigs were purchased from a slaughter house where all offal of animals was thrown to them. We had occasion afterward to visit the place where the pigs were bought, and found the intestines of several animals, sheep's heads, lungs and blood, put where the hogs had the best chance to become infected with the parasites. Any hog affected with trichinæ will show the same symptoms, and great care should be taken about using any kind of pork that may have been affected in that way. We have seen hogs that were so fat that they

dragged their hind legs when they were forced to move. The owner of such should not think that they are models of perfect health, as they are in a doubtful state.

No. 2 represents a case of paralysis of the lumbar muscles, caused by injury or exposure. A farmer in cleaning out the pen placed a shovel on the loins of a hog very lightly, he said, but from that moment afterward the pig walked with his back humped as if he had disease of the kidneys. No one should strike a hog across the back, as no domestic animal is so easily injured permanently as the hog.

No. 3 represents a case of tape worm in the small intestine and stomach of the pig. The owner stated that all the hogs did well till they had the run of the field; then they did not do well, although well fed. They were always hungry, but they did not fatten. Hogs infested with tape worms are never satisfied, but devour anything they can, even the excrements of any animal. The tape worms that infest the pigs are Tænia maculata and Tænia expasia. One of our specimens measures twenty-two feet. The medicines to cause their expulsion are kousso, oil of turpentine, ground root of male fern, and areca nut. Santonine can be well powdered and given in the food, mixed with molasses. It is the best mixture that can be given, as it does not cause nausea, like oil, and has no flavor of medicine.



DISEASES OF HOGS.

No. 4 represents a case of indigestion. The owner said that his hogs had some disease about them, and were affected very strangely. They did not care to leave their nests to feed, unless forced, and then they squealed as if suffering from pain. When they came to the trough they would take a mouthful as if they were hungry, crouch, run backward, and fall over, but in tifteen min-

struggles of than

utes would return to the food and eat as if nothing was the matter. That is a clear case of indigestion, and when slaughtered while showing these symptoms, the inside linings of the pigs' stomachs and part of the colon were found coated with a dry substance like brown flour. Feeding too fine meal caused the trouble. Whenever plenty of vegetable diet is given we never find such symptoms. A rush of blood to the head was caused by impeded circulation in the system. This teaches us the need of albuminous food of a laxative nature.

OF INTEREST T() CULTIVATORS OF LARGE AND SMALL FARMS.

Practical Points in Drainage—How to Find and Keep Grade—How to Dig the Ditches—Directions About the Laying and Covering of the Tiles.

W. J. Chamberlain, of the Iowa Agricultural college, contributes to Country Gentleman some practical hints on drainage, which are of general interest. First, he tells that the mains ought to follow the natural depressions where the water runs off upon the surface in wet times, of course straightening the crooks somewhat. If there is a regular slope like the roof of a house, only not so steep, the mains should take the of place the eaves' troughs, and the laterals, if any, should run straight down the slope as nearly as may be. If the fall is very slight, it may need a field leveling instrument to lay out the system. But usually a very wet time is the best to locate drains. A furrow plowed then by the eye will work its own grade or show it.

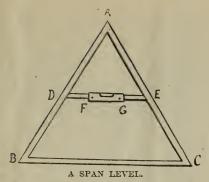
If you have not a ditching machine use a heavy working plow to throw out the first eight or ten inches, drive straight. Begin the spade digging at the outlet and work along up the mains and laterals. The water will show the level. Permit no dips or depressions. Dig as narrow and true as possible to the required depth, and groove the bottom of the ditch with a bottoming scoop of size adapted to the tiles used. The grade may be nearly established with the plow plowing deeper through knolls and shallower through depressions, then dig two or three depths of the spade according to death required, keeping the spade

at the same angle all the time, and thrusting it full depth each time. If there is no water in the soil to show level, the surest way is to draw some into the field, and when your eye or the span level says your groove is cut straight and true for a hundred feet or more, turn in just enough water at the upper end to test it. If it stands anywhere in long puddles, you must cut down the high portions until no puddles remain.

Mr. Chamberlain makes the span level thus: Take three pieces of 1 by 2 inch pine batten 84 feet long, halve them together with screws firmly at the ends in the form of an equilateral triangle. Then half way up from one side, b c, and exactly parallel to it, screw on a fourth piece d e (see figure). To the side of the cross piece, de screw a common 75 cent spirit level, f g, so that when b c stands on a level floor the air bubble shall show level, and its middle be the middle of de. Change the triangle end for end on the floor, to be sure your spirit level is exactly parallel with the bottom of b c. Then if you want to graduate it raise b 1 inch at a time, leaving c resting on the floor, and mark the brass of the spirit level for each quarter and half inch up to two or three inches. Then raise c in the same way and graduate the other side.

Before the groove is cut in the bottom of the ditch this span level may be applied all along, and show the exact fall per rod. Then the groove cutter can take out humps, and the level test its work. B c is half a rod long, and so onequarter inch fall for its length makes onehalf inch fall per rod, and so on. Never be content unless your level shows some fall towards your outlet. The more uniform the fall the better. If you know, for example, that your fall is only onehalf inch per rod, you must keep your grade down to about that rate, not varying, or you will have trouble. Beginning at the lower end the tendency of a new hand is to "lose grade," that is, to work towards the surface. The span level will help prevent this.

The groove should be cut so that the tiles will fit without rolling, and shall touch bottom all the way. Lay the tiles from the outlet up stream, look through each tile to see that it is clear of obstructions, and lay it so that it will not rock or wabble. Chuck it up tight against the preceding tile, and then step forward upon it and lay the next.



Lay no tiles that are not hard burned enough to give a clear metallic ring when struck with a hammer, and lay no cracked or broken ones. For junctions with laterals get from the kiln, if possible, main tiles with junctions formed, or at least holes cut for junctions. If you have to cut with a trowel, use great care and secure great perfection.

Stand in the ditch when the tiles are laid, and with the ditching spade shovel in the first clay (the subsoil last dug out), and see that it rattles or fills clear down on both siles of the tiles. Tramp very thorough a with the feet as you fill, until you have alled in some eight inches deep. The rest may be plowed in by running a very long evener and long inside lines, and having one horse on each side of the ditch.

In very compact clay subsoil thorough drainage requires laterals from thirty-three to fifty feet apart, to drain the soil rapidly and thoroughly enough to prevent damage to crops after very heavy rains. With fair fall, a tile will drain an area equal to one-half its diameter (in inches) squared—that is, a two inch tile should carry the water from one acre (two divided by two and squared), a four inch tile four acres, a five inch tile about six acres, and a six inch tile about nine acres; the less the grade, the wider the "suction range," and the longer the drain, the larger the tiles required. A drain may begin at its lower end with four inch tiles, and diminish to three and then to two towards its upper end.

A new rhubarb bed is easier made now than in spring. Thoroughly manure and spade the soil of the bed. Take up the old roots and so cut them with a sharp spade that each bud will have as large a piece of root attached as may be, and plant them four feet apart each way and cover the bed with a thick coating of manure.

GATHERED CRUMBS.

Colorado's wheat yield the present year leads all the rest. It stands twenty-six bushels as against fifteen—the average everywhere.

The price paid for the mammoth horses that draw the transfer wagons of Denver will average \$400 each. It pays to breed and raise big horses.

Barley is the only grain crop that America imports. This is quite curious, since the country is susceptible of growing millions of bushels for export. The American farmer has had such a dislike to the bearded stuff that he neglected it sadly.

That English syndicate has at last gobbled the Pillsbury and Washburn flour mills at Minneapolis, at \$5,200,000; property transferred Nov. 1.

Drouths have seriously affected fall pasturage in Ohio, Illinois and Wisconsin, as well as Michigan; and farmers, unable to properly care for their cattle, are forcing them upon an already glutted market.

Bees should not be placed near a street or driveway. If a person is so situated as to be compelled to keep them in such a place, a high board fence is quite a protection against trouble; or a row of high trees, or a building, in fact anything that will compel them to rise high when the fly from the hive. When they are thus situated persons living in the vicinity would not be aware of colonies near, as they rise up out of the way of mischief.

STORING SWEET POTATOES.

When sweet potatoes are designed for winter use or sale these ought to be stored in a well ventilated place free from dampness, where they can remain until cold weather comes on, when they should be removed to a warmed room. The packages containing the potatoes should not be moved more than is absolutely necessary, as changing them from place to place is apt to produce sweat and decay. Sweet potatoes are sensitive to any change of atmosphere, moisture and handling. They will lie on a floor that is inclosed and roofed a long time without injury, provided they are put there without bruising, and if the pile is not deep, and if the temperature does not get near the freezing point. Pick those which are to be preserved over

all the necessities of life in abundance comparatively little money; but it brings many of the real comforts and

Parming brings

winter as carefully as apples are picked, and put them in a dry, cool place that is well secured against rain and frost. Dry ground makes a good floor, provided it is protected from rain or cold on the outside. The pile must not be deep-a foot in depth is enough during the warm weather of the fall months; it might be made deeper late in December, when the potatoes are picked over and all damaged ones thrown away.

One of the very best places to keep sweet potatoes during winter is a tight loft or room over the kitchen, so constructed that the heat from below can readily be utilized in warming the loft or upper room. The two important things about keeping sweet potatoes in winter are to keep them dry and warm enough to prevent their freezing. Make the arrangements so that fresh air may be passed over them. They are better packed in dry sand, chaff, cut straw or some similar matter. Don't cover them for winter until the season admonishes you; that is to say, keep them in a dry, cool place until frosts appear, then close them in.

FARM BARN, AND HENNERY.

This Will Be of Interest to the Agriculturist.

This illustration gives a correct idea of a country farm barn, from Palliser & Palliser, New York, which will interest those who are agriculturally inclined. To the farmer it is one of the most important things how he shall house his stock and provide storage for his grain, fodder, etc., and yet do it in an economical manner, and the many farm barns that are to be seen, with their chopped up and checkered appearance, indicate that this matter has not had a proper amount of study and forethought.

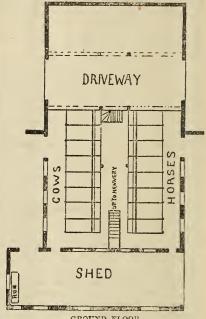


VIEW.

Let your barns look like barns, your houses like houses. We would not for anything

have your barns be mistaken for houses or your houses for barns; for such things we have seen, and it makes us feel as if there was a screw loose somewhere. Barns should not be built for show. They should, of course, be made to look well, and be pleasant spots in the landscape, and built in the most substantial manner possible—should be arranged to save as much labor as possible in the care of the animals that are to be housed and fed in them. Let them be well ventilated and lighted, properly floored; the stonework of the foundation thoroughly built, not dry, but laid up in good cement mortar. Don't invite the rats, as they will come without.

It has always been a mystery to the writer why the farmers have not, in a general way, been wide awake enough to their own interests to properly house their fowls, instead of letting them run wild over the whole place, and roost on wagons, carts and agricultural implements when not in use and stored; to



GROUND FLOOR.

let them lay their eggs where they please, and then have pleasure of hunting for them and often finding them at a late day-such certainly must be the case, else why so many bad eggs amongst those "nice fresh country eggs?" Chickens are one of the most profitable adjuncts to any farm, and it is a very easy matter to keep them where there is a number of cattle to feed.

The hennery here shown was carried out as an addition to barn at hillside farm, New Milford, Conn As the shed below is a necessity in connection with barn, and a roof indispensable, the only additional expense is the floor, one side and ends, with the interior fittings, to make a hennery which will acMoney shapes the law.

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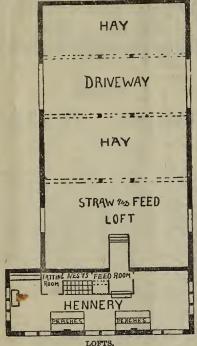
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commodate easily 100 to 200. The floor should be tightly boarded, then covered with a coat of boiled pitch and tar, on which spread soil two or three inches in depth. This will give an elegant scratching and wallowing ground.



The windows all arranged to slide sideways, the openings on outside being covered with wire netting; the feed bin built so as to hold several bushels, and arranged to take care of itself, by constructing the bottom so as to empty into a small trough into hennery, in front of which is placed a perch; the chicks to feed in space adjoining marked chickens, which is inclosed by pickets, open enough for them to run through. Nest boxes are arranged in tiers, one above another, and loose, so that they can be taken through into nest room and emptied, and for setting hens, turned around and feed from nest room.

Beecham's Pills cure sick headache.

ORCHIDS.

The idea is more or less prevalent that orchids are difficult to grow, whereas, in point of fact under favorable conditions these may be cultivated as readily as a camelia or azalea. Orchids can be

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grown very well with a general collection of store plants where a temperature is maintained at 60 to 80 or 90 degs. in summer and 55 to 70 degs. in winter for the Indian varieties, and 50 to 75 degs. in summer and 45 to 60 degs. in winter for the South American ones.



THE MOTH ORCHID.

Having resolved to grow orchids, the next important thing is the selection of suitable kinds. This is more important than many are aware of, as in right selection depends success and consequently keeping up or relinquishing orchid culture. If the amateur starts right and the few plants give him satisfaction, he will surely increase the collection and not only grow showy kinds but also many of the odd and pretty varieties which are appreciated only by real amateurs and counoisseurs. On the contrary, if the beginner makes a wrong selection and fails in his success, he then naturally gives up growing this class of plants as something beyond his reach and comprehension. The most important matter to consider in the selection of plants is the average temperature of the house in which they should be grown; secondly, procure only good, strong plants that would grow in such temperature and would flower the first year. To any one beginning on a very small scale, W. A. Manda, writing from the Harvard Botanic gardens in American Garden, recommends the following:

Cypripedium insigne, Cypripedium Harrisianum, Cattleya trianæ, Cattleya Mossiæ, Zygopetalum Mackayi, Cælogyne

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cristata, Lycaste Skinneri, Odontoglossum crispum, Lælia anceps, Phaius grandifolius, Dendrobium nobile and Epidendrum vitellinum majus. All the above twelve kinds can be purchased in flowering plants for about \$15, and are not only the showiest and most floriferous, but also will stand better a variable temperature and almost any treatment.

In the cut is shown a sumptuous orchid, remarkable among other things for the great area covered by its inflorescence. It is popularly known as Stuart Low's moth orchid. It is an Indian orchid and has flattened roots that require careful management, more especially as the plant flowers in the winter. It is not well adapted for growing on a block, as in such a situation it does not obtain sufficient moisture. On the other hand, pot culture does not answer per-fectly, for the slightest defect of the drainage tells with serious effect on the health of the plant. It is best in a basket with sphagnum and a few pieces of charcoal, for while it should be always moist, and never so to excess, it needs surface space for its roots, such as pot culture does not afford, while a block is apt to prove a starving situation.

IRISH POTATO CULTURE.

From an Essay Read by D. Morrison Before the Atlanta, Ga., Horticultural Society.

With other practical suggestions made on the cultivation of Irish potatoes by Mr. Morrison, as reported by Dixie Farmer, were the following:

After you have decided what variety you wish to plant, the next thing is how to plant for best results. Some potato growers advocate planting one eye, some two, others three, others a small potato whole; some large potatoes whole; while others say all you need is to eat the potatoes and plant the peelings. Now, I find in this, as in other things where doctors differ so widely, the middle ground is the safest. I therefore recommend the selecting of large and well shaped potatoes having a clear skin, with full eyes that have not been sprouted; then cut so that each piece has at least two eyes and a part of the heart or core of the potato. This plan is called by Dr. Sturtevant the scientific method of cutting seed potatoes; but it is not new by any means, for it has been prac-

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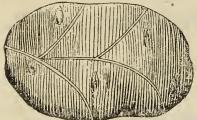
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ticed by our people, the Scotch farmers, for over thirty years, and they simply call it the common sense way.

In cutting you should use a very thin, narrow bladed knife, an old table or case knife that has been ground thin and sharp will answer. The reason for this is, that a thick backed knife, such as a pocket knife, causes the potato to crack across the core or eve roots that extend from the eye to the center, although you don't readily see them; but by the aid of a potato that has the core colored, you will get the idea. I have found seed to do better when cut a day or two before planting. The cut part becomes dryer and is more easily handled. Dry wood ashes sifted over cut seed has also a good effect. Have the drills opened in the morning and left open during the greater part of the day, so that the soil and the seed may get warm, which will give the seed a quicker start than they otherwise would get. Plant seed with the eyes up, in the prepared drills, about twelve inches apart, and cover lightly with a side draft scraper or a Planet, Jr., Horse hoe, with rake covering attachment. If your land needs any additional manure, sow on top of drills from 400 to 600 pounds of good fertilizer per acre. If the land becomes caked by heavy rains it will pay well to run a light harrow on the drills to break up the crust before the plants are up; then again when three to four inches high run a cultivating harrow across the drills. From that on the soil should be frequently stirred by cultivator or horse hoe so that it may re-



HOW TO CUT SEED POTATOES tain the moisture as well as to loosen the ground around the plants. While I favor in the south level culture as a general thing, owing to the long drought we have, yet I have had the best results from slightly hilling or hoeing up the drills at the time of laying by the erop, which should be just before the blossom comes on; after that potatoes should not be disturbed.

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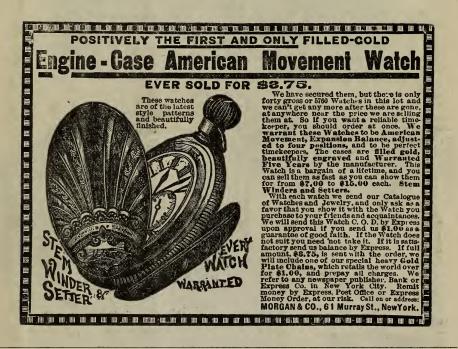
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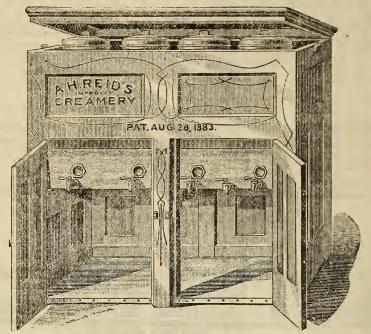
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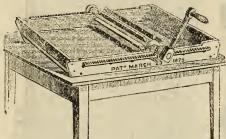
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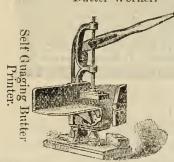
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